

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A method of retrieving a data item to a mobile device carried by a first user visiting a real-world space, the data item being available from a service system to mobile devices of users visiting the space, the method comprising:

(a) keeping a record on an on-going basis of which mobile devices in said space, if any, hold or are likely to be holding the data item;

(b) seeking to retrieve the data item to the first user's mobile device by requesting transfer only from mobile devices that, according to said record, hold or are likely to be holding the data item; and

(c) in the event that (b) is unsuccessful, retrieving the data item to the first user's mobile device by transfer from the service system.

2. (previously presented) A method according to claim 1, wherein the data item is associated with a location in said space, (b) being initiated as the user approaches or is at that location and including carrying out an enquiry limited to mobile devices that are, or are likely to be, near the first user or

said location, to identify a mobile device, if any, holding the data item.

3. (original) A method according to claim 2, wherein said enquiry is limited to mobile devices near the mobile device of the first user by having that device make the enquiry by using a short-range communications means to ask other mobile devices if they have the data item.

4. (original) A method according to claim 2, wherein said enquiry is limited to mobile devices near the mobile device of the first user or near the location associated with the data item, by monitoring the locations of the mobile devices in said space.

5. (original) A method according to claim 2, wherein said enquiry is limited to mobile devices likely to be near the mobile device of the first user by pre-defining a set of mobile devices which are associated with users belonging to the same visit group.

6. (previously presented) A method according to claim 2, wherein in (b) said enquiry is carried out by the first user's mobile device.

7. (previously presented) A method according to claim 2, wherein in (b) said enquiry is carried out by the service system at the prompting of the first user's mobile device, the service system identifying back to the first user's mobile device at least one device holding the data item where the enquiry identifies any such device.

8. (canceled)

9. (previously presented) A method according to claim 1, wherein said on-going record keeping comprises tracking at least the first one of:

transfers of the data item from the service system to a mobile device;

transfers of the data item between mobile devices; and

deletions of the data item from a mobile device.

10. (previously presented) A method according to claim 1, wherein said on-going record keeping comprises at least the first one of:

periodically making an inventory of items currently held by each mobile device; and

recording incremental changes to the inventory of each mobile devices as items are added/removed.

11. (previously presented) A method according to claim 1, wherein in (b) said enquiry is carried out by the first user's mobile device.

12. (previously presented) A method according to claim 1, wherein in (b) said enquiry is carried out by the service system at the prompting of the first user's mobile device, the service system identifying back to the first user's mobile device at least one device holding the data item where the enquiry identifies any such device.

13. (previously presented) A method according to claim 1, wherein multiple data items each with a respective associated location in said space are available from the service system, the method further comprising an on-going process in which said space is treated as divided into zones and, for each zone, the service system causes the mobile devices in the zone to load data items associated with locations in that zone beyond the normal needs of the devices whereby to increase the likelihood of (b) being successfully effected from a mobile device in the same zone as the first-user's mobile device.

14. (previously presented) A method of retrieving a data item to a mobile device carried by a first user visiting a real-world space, the data item being one of a plurality of data items

available from a service system to mobile devices of users visiting the space, each one of said plurality of data items having a respective associated location in said space, the method comprising:

(a) seeking to retrieve the data item to the first user's mobile device by transfer from another mobile device in said space; and

(b) in the event that (a) is unsuccessful, retrieving the data item to the first user's mobile device by transfer from the service system; the method further comprising

an on-going process in which said space is treated as divided into zones and, for each zone, upon a mobile device exiting the zone, it transfers the data items it holds that have associated locations in the zone being exited to devices, if any, still in said zone to increase the likelihood of (a) being successfully effected from a mobile device in the same zone as the first-user's mobile device.

15. (previously presented) A method according to claim 1, wherein a transfer effected in (a) is effected using a communications mechanism that is different to that used for a transfer effected in (b).

16. (previously presented) An arrangement for retrieving a data item to a mobile device carried by a first user visiting a

real-world space, the data item being available from a service system to mobile devices of users visiting said space, the arrangement comprising:

record means for keeping an on-going record of which mobile devices, if any, hold or are likely to be holding the data item;

first retrieval means for seeking to retrieve the data item to the first user's mobile device by transfer from another mobile device and including enquiry means for carrying out an enquiry limited to mobile devices that, according to said record, hold or are likely to be holding the data item;

second retrieval means for retrieving the data item to the first user's mobile device by transfer from the service system; and

control means for organising retrieval of the data item by first causing the first retrieval means to seek to retrieve the data item and then, if this is unsuccessful, causing the second retrieval means to retrieve the data item.

17. (original) An arrangement according to claim 16, wherein the data item is associated with a location in said space, the arrangement including means responsive to the user approaching that location to cause the control means to initiate retrieval of the data item, and the first retrieval means including enquiry means for carrying out an enquiry limited to mobile devices that are, or are likely to be, near the first user or said location, to identify a mobile device, if any, holding the data item.

18. (original) An arrangement according to claim 17, wherein the first retrieval means includes short-range communication means forming part of said first user's mobile device, the enquiry means being arranged to use said short-range communications means to ask other mobile devices if they have the data item whereby inherently to limit its enquiry to mobile devices near the mobile device of the first user.

19. (original) An arrangement according to claim 17, wherein said arrangement includes location means for obtaining the locations of the mobile devices in said space, the enquiry means being arranged to use the device locations obtained by the location means to limit its enquiry to mobile devices near the mobile device of the first user or near the location associated with the data item.

20. (original) An arrangement according to claim 17, wherein said arrangement includes set-defining means for pre-defining a set of mobile devices which are associated with users belonging to the same visit group, the enquiry means being arranged to limit its enquiry to mobile devices likely to be near the mobile device of the first user by making its enquiry only to devices which, according to said set-defining means, are members of said set.

21. (original) An arrangement according to claim 17, wherein said enquiry means is part of the first user's mobile

device.

22. (original) An arrangement according to claim 17, wherein the enquiry means is part of the service system and the first retrieval means further includes means at the first user's mobile device for prompting the enquiry means to carry out its enquiry and identify back to the first user's mobile device at least one device holding the data item where the enquiry identifies any such device.

23. (canceled)

24. (previously presented) An arrangement according to claim 16, wherein said record means is arranged to track at least the first one of:

transfers of the data item from the service system to a mobile device;

transfers of the data item between mobile devices; and

deletions of the data item from a mobile device.

25. (previously presented) An arrangement according to claim 16, wherein said record means is arranged to carry out at least the first one of:

periodically making an inventory of items currently held by

each mobile device; and

recording incremental changes to the inventory of each mobile devices as items are added/removed.

26. (previously presented) An arrangement according to claim 16, wherein said enquiry means is part of the first user's mobile device.

27. (previously presented) An arrangement according to claim 16, wherein the enquiry means is part of the service system and the first retrieval means further includes means at the first user's mobile device for prompting the enquiry means to carry out its enquiry and identify back to the first user's mobile device at least one device holding the data item where the enquiry identifies any such device.

28. (original) An arrangement according to claim 16, wherein multiple data items each with a respective associated location in said space are available from the service system, the arrangement further comprising location means for monitoring the locations of the mobile devices, and a zone-based manager that is arranged to treat said space as divided into zones and, for each zone, to cause the mobile devices in the zone to load data items associated with locations in that zone beyond the normal needs of the devices whereby to increase the likelihood of the first retrieval means being successful in seeking to

retrieve said data item from a mobile device in the same zone as the first-user's mobile device.

29. (previously presented) An arrangement for retrieving a data item to a mobile device carried by a first user visiting a real-world space, the data item being one of a plurality of data items available from a service system to mobile devices of users visiting the space, each one of said plurality of data items having a respective associated location in said space, the arrangement comprising:

first retrieval means for seeking to retrieve the data item to the first user's mobile device by transfer from another mobile device;

second retrieval means for retrieving the data item to the first user's mobile device by transfer from the service system;

control means for organising retrieval of the data item by first causing the first retrieval means to seek to retrieve the data item and then, if this is unsuccessful, causing the second retrieval means to retrieve the data item; and

transfer means for executing an on-going process in which said space is treated as divided into zones and, for each zone, upon a mobile device exiting the zone, it transfers the data items it holds that have associated locations in the zone being exited to devices, if any, still in said zone to increase the likelihood of the data item being successfully retrieved from a mobile device in the same zone as the first-user's mobile device.

30. (original) An arrangement according to claim 16, wherein the first and second retrieval means are arranged to use different respective communication mechanisms for effecting retrieval of said data item.

31. (canceled)

32. (canceled)